

What is claimed is:

1. An image-reading apparatus for reading an image formed on a document, comprising:

an automatic document feeder for automatically feeding said document;

a dynamic-document reading section for reading said image while said automatic document feeder is feeding said document;

a static-document reading section for reading said image while said document is put stationary on said static-document reading section;

a document-covering member for covering and pushing said document onto said static-document reading section, said document-covering member being capable of opening and shutting with regard to said static-document reading section when said automatic document feeder is opened with regard to said dynamic-document reading section;

a light source mechanism for irradiating an exposing light onto said document at either said dynamic-document reading section or said static-document reading section, said light source mechanism being stationary under said dynamic-document reading section to irradiate said exposing light onto said document, being moved by said automatic document

feeder, through said dynamic-document reading section, or said light source mechanism moving under said static-document reading section to scan said document by irradiating said exposing light through said static-document reading section;

an image-capturing element for receiving a light reflected from said document to convert said image into electronic signals; and

a controller for controlling moving and light-emitting actions of said light source mechanism;

wherein, when said automatic document feeder is opened with regard to said dynamic-document reading section and said document is put stationary on said static-document reading section to read said image formed on said document, said controller controls said light source mechanism so that substantially none of said exposing light emitted from said light source mechanism leak outside through said dynamic-document reading section.

2. The image-reading apparatus of claim 1;

wherein, when said document is put stationary on said static-document reading section to read said image formed on said document, said light source mechanism moves to said static-document reading section from said dynamic-document reading section, and said controller controls a timing to

start emitting said exposing light from said light source mechanism so that substantially none of said exposing light emitted from said light source mechanism leak outside through said dynamic-document reading section.

3. The image-reading apparatus of claim 2,

wherein, either when said light source mechanism moves a predetermined distance toward said static-document reading section from a start position located at said dynamic-document reading section, or when a predetermined time has elapsed after said light source mechanism starts moving toward said static-document reading section, said controller activates said light source mechanism to emit said exposing light.

4. The image-reading apparatus of claim 3,

wherein said controller changes a value of said predetermined distance or said predetermined time, corresponding to a moving velocity of said light source mechanism, said start position of said light source mechanism or a reading magnification ratio.

5. The image-reading apparatus of claim 2, further comprising:

a light-source position detector, disposed at a predetermined position, for detecting said light source mechanism in midcourse of moving;

wherein said controller controls said light-emitting actions of said light source mechanism based on detected results of said light-source position detector.

6. The image-reading apparatus of claim 5,

wherein said predetermined position is equivalent to a detecting position at which said light-source position detector detects said light source mechanism in midcourse of moving between said dynamic-document reading section and said static-document reading section.

7. An image-forming apparatus comprising the image-reading apparatus of claim 1,

wherein said image-forming apparatus forms an image on a recording material, based on image data generated by said image-reading apparatus.

8. An image-reading apparatus for reading an image formed on a document, comprising:

an automatic document feeder for automatically feeding said document;

a dynamic-document reading section for reading said image while said automatic document feeder is feeding said document;

a static-document reading section for reading said image while said document is put stationary on said static-document reading section;

a document-covering member for covering and pushing said document onto said static-document reading section, said document-covering member being capable of opening and shutting with regard to said static-document reading section when said automatic document feeder is opened with regard to said dynamic-document reading section;

a light source mechanism for irradiating an exposing light onto said document at either said dynamic-document reading section or said static-document reading section, said light source mechanism being stationary under said dynamic-document reading section to irradiate said exposing light onto said document, being moved by said automatic document feeder, through said dynamic-document reading section, or said light source mechanism moving under said static-document reading section to scan said document by irradiating said exposing light through said static-document reading section;

an image-capturing element for receiving a light reflected from said document to convert said image into electronic signals; and

a shutter member being movable between a shading position, at which said shutter member shades said exposing light emitted from said light source mechanism, and a non-shading position, at which said shutter member does not shade said exposing light emitted from said light source mechanism;

wherein, when said document is moved by said automatic document feeder at said dynamic-document reading section to read said image formed on said document, said shutter member is positioned at said non-shading position, while when said document is put stationary on said static-document reading section to read said image formed on said document, said shutter member is positioned at said shading position.

9. The image-reading apparatus of claim 8,

wherein said shutter member is movable in conjunction with moving actions of said light source mechanism.

10. The image-reading apparatus of claim 9,

wherein said shutter member is urged to said shading position by an elastic member, and said light source mechanism moves said shutter member to said non-shading

position in conjunction with its moving action from said static-document reading section to said dynamic-document reading section, while opposing to a urging force generated by said elastic member.

11. The image-reading apparatus of claim 8,

wherein said shutter member comprises a cleaning member for cleaning said dynamic-document reading section while moving with said shutter member.

12. The image-reading apparatus of claim 8,

wherein said shutter member is disposed at a side of said dynamic-document reading section opposite to another side above which said automatic document feeder is arranged.

13. An image-forming apparatus comprising the image-reading apparatus of claim 8,

wherein said image-forming apparatus forms an image on a recording material, based on image data generated by said image-reading apparatus.

14. An image-reading apparatus for reading an image formed on a document, comprising:

an automatic document feeder for automatically feeding said document;

a dynamic-document reading section for reading said image while said automatic document feeder is feeding said document;

a static-document reading section for reading said image while said document is put stationary on said static-document reading section;

a document-covering member for covering and pushing said document onto said static-document reading section, said document-covering member being capable of opening and shutting with regard to said static-document reading section when said automatic document feeder is opened with regard to said dynamic-document reading section;

a light source mechanism for irradiating an exposing light onto said document at either said dynamic-document reading section or said static-document reading section, said light source mechanism being stationary under said dynamic-document reading section to irradiate said exposing light onto said document, being moved by said automatic document feeder, through said dynamic-document reading section, or said light source mechanism moving under said static-document reading section to scan said document by irradiating said

exposing light through said static-document reading section;
and

an image-capturing element for receiving a light reflected from said document to convert said image into electronic signals;

wherein said exposing light, emitted from said light source mechanism, exhibits a maximum intensity in a direction oriented to said static-document reading section from said dynamic-document reading section.

15. The image-reading apparatus of claim 14,

wherein said light source mechanism comprises either a xenon lamp having directivity, or a halogen lamp with a reflector for exhibiting directivity.

16. An image-forming apparatus comprising the image-reading apparatus of claim 14,

wherein said image-forming apparatus forms an image on a recording material, based on image data generated by said image-reading apparatus.

17. An image-reading apparatus for reading an image formed on a document, comprising:

an automatic document feeder for automatically feeding said document;

a dynamic-document reading section for reading said image while said automatic document feeder is feeding said document;

a static-document reading section for reading said image while said document is put stationary on said static-document reading section;

a document-covering member for covering and pushing said document onto said static-document reading section, said document-covering member being capable of opening and shutting with regard to said static-document reading section when said automatic document feeder is opened with regard to said dynamic-document reading section;

a light source mechanism for irradiating an exposing light onto said document at either said dynamic-document reading section or said static-document reading section, said light source mechanism being stationary under said dynamic-document reading section to irradiate said exposing light onto said document, being moved by said automatic document feeder, through said dynamic-document reading section, or said light source mechanism moving under said static-document reading section to scan said document by irradiating said exposing light through said static-document reading section;

an image-capturing element for receiving a light reflected from said document to convert said image into image data;

a reference board for reflecting said exposing light, so that said image-capturing element converts a light reflected from said reference board into compensation data utilized for a shading compensation operation; and

a shading compensating section for applying said shading compensation operation to said image data converted by said image-capturing element, based on said compensation data converted by said image-capturing element;

wherein said reference board is disposed between said dynamic-document reading section and said static-document reading section.

18. An image-forming apparatus comprising the image-reading apparatus of claim 17,

wherein said image-forming apparatus forms an image on a recording material, based on said image data generated by said image-reading apparatus.